



RACINGLINE

DQ381 Gearbox Cooler

Golf 7.5 / Audi S3 8V

& all other MQB 2.0 TSI 7-speed

VWR29DQ381

FITTING INSTRUCTIONS



WHAT'S IN THE KIT?

- ▷ 1 x RacingLine Thermostatic Sandwich Plate
- ▷ 1 x RacingLine Heat Exchanger
- ▷ 4 x Silicone Hose + 5 Hose Clips
- ▷ 1 x RacingLine Hose Joiner
- ▷ 1 x -10AN 10 Row Oil Cooler Radiator
- ▷ 2 x 210 Series Braided Hose
- ▷ 1 x Braided Hose Separator
- ▷ 2 x Oil Core End Brackets
- ▷ 2 x Golf 7 / 7.5 / Universal Brackets
- ▷ 2 x Audi S3 Brackets
- ▷ 4 x Rubber Bobbins
- ▷ 8 x M6 Flange Button Screw
- ▷ 4 x M6 Jack Nuts (S3 Kit)
- ▷ 16 x Nyloc Nut and Washers
- ▷ 3 x M8 Button Head Screws

REQUIRED TOOLS AND PARTS

- ▷ T25 & T30 Torx Bits
- ▷ 4mm, 5mm & 6mm Allen Bits
- ▷ 1" - 1/16 Spanner
- ▷ 1" Spanner
- ▷ 10mm Spanner / Hex Socket
- ▷ 13mm Spanner / Hex Socket
- ▷ Screwdriver / 7mm Hex Socket
- ▷ M10 Spline
- ▷ VW DQ381 Oil (G 055 529 A2)
- ▷ OEM Hose Clip Remover
- ▷ 2 x Coolant Hose Clamps
- ▷ 6.5mm / 11mm Drill Bit

FITTING NOTES

- ▷ This is a complex install, and any mistakes on the oil system will be critical to gearbox longevity.
- ▷ Therefore we recommend professional fitment for all modification to the car's gearbox oil system.
- ▷ We also advise that you carry out an oil service once kit is installed to ensure correct oil levels.
- ▷ A clean environment is vital for any oil system modification.
- ▷ Ensure you understand how to refill and check oil levels of a DQ381 gearbox, do not attempt install if you cannot perform this task.



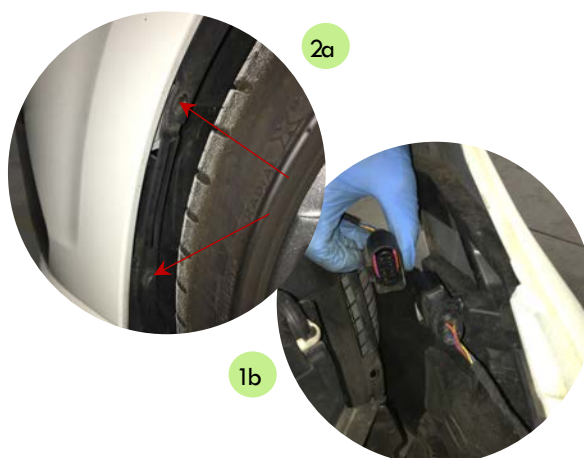
Step 1:

Front grill removal – Remove the two T25 screws show in *figure 1* below. Once removed pull the grille forwards in the direction shown until all retaining clips are detached (for Golf 7.5 & other models with adaptive cruise in the grille detach the electrical connector from the rear of the VW emblem).



Step 2:

Remove front bumper – Using a T25 bit remove seven T25 screws from along lower front lip and four screws from both the nearside and offside arch shown in *figure 2a*. Once all T25 screws are removed, pull bumper forward gently until both sides are detached. At this point locate the electrical connector on the offside of the bumper and disconnect as shown in *figure 2b*.



Step 3:

Air Intake Removal – Using the OEM hose clip remover and 7mm hex socket, loosen the front & rear hose clips and remove intake hose which is highlighted in *figure 1*. Next remove the intake duct by removing the T25 torx screws on the front slam panel, once removed pull the air filter box up and remove from the vehicle. Set duct, air box and hose aside ready for refit at the end of the installation.

Step 4:

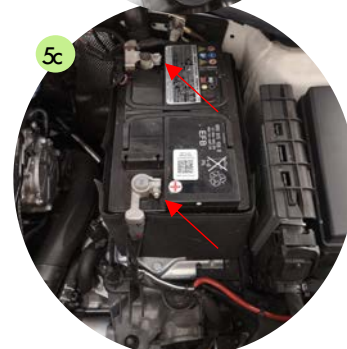
Muffler to Intercooler Boost Pipe Removal – Remove engine under tray using a T25 Torx bit, once removed using a 7mm socket to loosen muffler boost hose clip, next undo 2 x T30 boost pipe retaining screw's, finally loosen intercooler side hose clip to allow the boost pipe to be removed, then manoeuvre boost pipe to remove from engine bay. This will give more room for the DSG cooler kit installation.



Step 5:

Battery and Battery Tray Removal – Using a 10mm socket, disconnect the positive battery terminal and move to one side, then disconnect the negative terminal and move to one side *figure 5c*. Next using a 13mm socket remove the battery retaining bracket bolt (*figure 5b*) and retaining bracket to allow the battery to be slid forward and removed from the engine bay.

Next remove the battery tray, this is completed by using a 10mm socket to remove the three retaining screws and one nut. They can be seen in *figure 5a*.

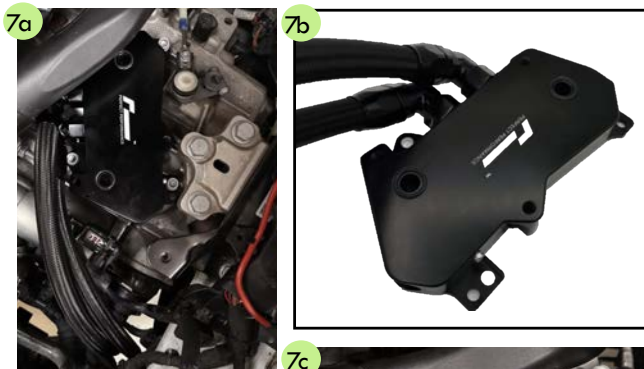


Step 6:

Heat Exchanger Removal – Attach the coolant hose clamps to the two coolant hoses which can be seen in *figure 6a*. Next remove both hose clips and pull hose from the heat exchanger, place the coolant lines away from the heat exchanger. Plug the heat exchanger outlets to control excess coolant flow. (Do not get coolant in gearbox oil outlets when removing heat exchanger – this will be detrimental to the gearbox). Now remove OEM heat exchanger via the 3 x M10 spline bolts, shown in *figure 6b*. (keep heat exchanger in place while all screws are removed to minimise oil spill), once detached remove and flip onto its back to reduce oil spillage. Clean any oil and coolant left on the gearbox before starting next step. (We advise to replace OEM O-Rings on gearbox outlets at this point with VW part No. WHT 008 226 – 15 x 2.5mm O-Ring)

Step 7:

Thermostatic Sandwich Plate and Heat Exchanger Install – Pre assemble thermostatic sandwich plate by screwing the forged hose ends into the 2 x -10AN outlets shown in *figure 7b*, next offer sandwich plate onto gearbox and bolt into place using the 3 OEM x M10 spline bolts (*figure 7a*). Then place RacingLine heat exchanger on top of sandwich plate. Using 3 x M8 button head bolts, bolt into place (*figure 7c*). Once in place route the braided oil lines down past the chassis leg and out of the front of the vehicle.

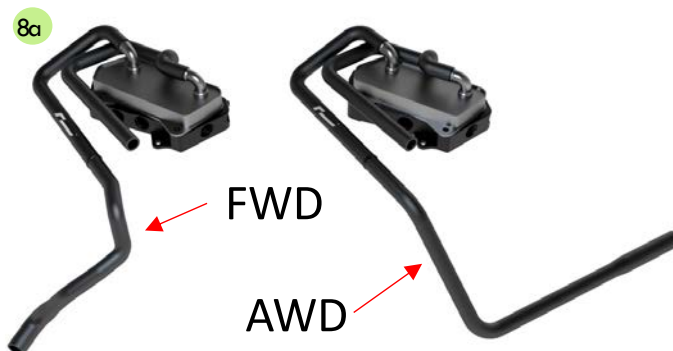


Step 8:

Coolant Line Install – Kit includes four silicone hoses, to install this kit, 3 hoses must be used for either the AWD or FWD vehicles. Use *figure 8a* for reference.

FWD Setup – pre-assemble hose labelled FWD with U-Shaped hose using 16mm hose joiner, leave clamps loose to allow orientation to determined on the vehicle – FWD section routes towards the engine throttle body to a 20mm outlet.

AWD Setup – pre-assemble hose labelled AWD with U-Shaped hose using 16mm hose joiner, leave clamps loose to allow orientation to determined on the vehicle – AWD section routes away from the engine and into a 20mm coolant outlet under the chassis leg.



The remaining coolant line routes from the front outlet on the heat exchanger to the OEM gearbox hard line coolant pipe.

Step 9:

Battery Tray Trimming – Remove grey polystyrene from underside of battery tray, by removing the retaining clip. Once removed offer the tray onto the vehicle and mark for trimming, see Figure 9a for example of trimming requirement.



Step 10:

Oil cooler bracket/mount installation – We have included two drop bracket sets in your kit (4x pieces), plus 2x end-brackets. Please see the uses in *figure 10*. Assemble the two end-brackets and two drop brackets to suit your car type using 4 of the button washer head screws with nyloc nuts. Then, bolt the bobbins to the cooler with nyloc nuts. Finally, bolt the bobbins into the base, to give the full assembly.

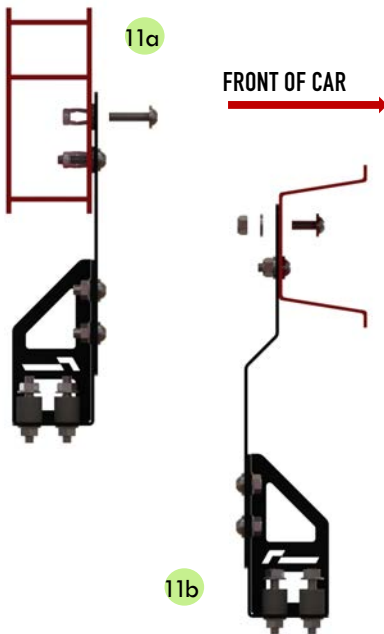
Note that the cooler can operate with outlets facing either up for Golf 7 applications or downwards for Audi S3.

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OPTION ONE:
GOLF 7 & ALL OTHER MQB



OPTION TWO:
AUDI S3 8V (2014+)



Step 11:

Offer the full assembly up to the main crash bar. Audi S3 (*figure 11a*) models have a closed-section crash bar which will require the 4x M6 Jack Nuts to be inserted through the front of the bar to act as captive nuts for the button washer head screws. Golf 7 and other MQB applications use an open-section crash bar (*figure 11b*) which after drilling will use the 4x button washer head screws with nyloc nuts & washers on the back of the bar.

Once you are confident that you have the correct assembly for your car, trial fit the location carefully (taking into account other components such as the radar cruise sensor & air temperature sensor). Then mark hole locations and carefully drill \varnothing 11mm holes through the bar on the S3 kit and \varnothing 6.5mm on the Golf 7/MQB kit.

Now tighten all the bolts fully on the assembly and fix it into the crash bar.

Next attach 90° hose ends to the oil cooler using a 1" spanner. Finally fit the oil line separator as shown in *figure 11* to keep hoses neatly mounted.

Step 12:

DSG oil fill up and recirculation – We strongly recommend that a full gear box oil change is carried out at the time of installation. Using VAG approved service method, expect to add approximately 1 litre of G 052 182 A2 more than the standard system. Using the correct OEM protocol to ensure oil levels are correct, if you are not confident with the OEM protocol, then it should be preformed by trained technician. (Do not drive vehicle with underfilled or overfilled fluid levels)



Step 13:

Refit front bumper then front grill (reverse of Step 5 then step 4) ensuring plug connectors are connected and washer fluid lines are in place before bolting the front bumper up. Reinstall boost pipe and then air intake in reverse of step 4 and then step 3.